

LISTING OF CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

1-4. (Cancelled).

5. (Currently amended) ~~The A~~ lentiviral vector of claim 4, comprising an attachment incompetent fusogenic polypeptide and a heterologous targeting polypeptide, wherein said attachment incompetent fusogenic polypeptide comprises lentivirus gp41 or a binding defective influenza hemagglutinin polypeptide, wherein said heterologous targeting polypeptide comprises a chimeric polypeptide that comprises a membrane attachment domain and a targeting domain, and wherein said membrane attachment domain comprises a transmembrane domain of CD40.

6-10. (Cancelled).

11. (Currently amended) ~~The A~~ lentiviral packaging construct of claim 10 comprising:

(a) a nucleic acid sequence encoding trans-acting factors sufficient for lentiviral vector generation and an attachment incompetent fusogenic polypeptide, wherein the encoded attachment incompetent fusogenic polypeptide comprises lentivirus gp41 or a binding defective influenza hemagglutinin polypeptide; and

(b) a nucleic acid sequence encoding a heterologous targeting polypeptide comprising a chimeric polypeptide that comprises a membrane attachment domain and a targeting domain, wherein said membrane attachment domain comprises a transmembrane domain of CD40.

12. (Currently amended) ~~The~~ lentiviral packaging construct of claim 11, wherein said trans-acting factors sufficient for lentiviral vector generation comprise lentiviral *gag*, *pol* and *rev*, or a functional fragment thereof.

13. **(Original)** The lentiviral packaging construct of claim 12, wherein at least one trans-acting factor sufficient for lentiviral vector generation is encoded on a separate nucleic acid vector.

14-19. **(Cancelled).**

20. **(Currently amended)** ~~The A~~ lentiviral packaging system ~~of claim 19~~having at least three nucleic acid vectors, comprising:

(a) a first nucleic acid vector comprising a packaging construct encoding a trans-acting factor for lentiviral vector generation,

(b) a second nucleic acid vector encoding an attachment incompetent fusogenic polypeptide comprising lentivirus gp41 or a binding defective influenza hemagglutinin polypeptide, said first and second nucleic acid vectors together encoding trans-acting factors sufficient for lentiviral vector generation, and,

(c) a third nucleic acid vector comprising a nucleic acid sequence encoding a heterologous targeting polypeptide, wherein said heterologous targeting polypeptide comprises a chimeric polypeptide comprising a membrane attachment domain and a targeting domain, and wherein said membrane attachment domain comprises a transmembrane domain of CD40.

21. **(Currently amended)** The lentiviral packaging system of claim ~~14~~20, wherein said trans-acting factor sufficient for lentiviral vector generation comprise lentiviral *gag*, *pol* and *rev*, or a functional fragment thereof.

22. **(Original)** The lentiviral packaging construct of claim 21, wherein at least one trans-acting factor sufficient for lentiviral vector generation is encoded on a separate nucleic acid vector.

23-28. **(Cancelled).**

29. **(Currently amended)** ~~The A~~ lentiviral gene delivery system ~~of claim 28~~
having at least four nucleic acid vectors, comprising:

(a) a first nucleic acid vector comprising a packaging construct encoding a trans-acting factor for lentiviral vector generation;

(b) a second nucleic acid vector comprising a fusogenic construct encoding an attachment incompetent fusogenic polypeptide comprising lentivirus gp41 or a binding defective influenza hemagglutinin polypeptide;

(c) a third nucleic acid vector comprising a lentiviral vector genome encoding lentiviral cis sequences sufficient for vector genome transduction, said first second and third nucleic acid vectors together encoding trans-acting factors sufficient for lentiviral vector generation; and,

(d) a fourth nucleic acid vector comprising a nucleic acid sequence encoding a heterologous targeting polypeptide comprising a chimeric polypeptide comprising a membrane attachment domain and a targeting domain, wherein said membrane attachment domain comprises a transmembrane domain of CD40.

30. **(Currently amended)** The lentiviral gene delivery system of claim ~~23~~29, wherein said trans-acting factor sufficient for lentiviral vector generation comprise lentiviral *gag*, *pol* and *rev*, or a functional fragment thereof.

31. **(Original)** The lentiviral gene delivery system of claim 30, wherein at least one trans-acting factor sufficient for lentiviral vector generation is encoded on a separate nucleic acid vector.

32. **(Cancelled).**

33. **(Currently amended)** The lentiviral gene delivery system of claim ~~23~~29, wherein said cis sequences sufficient for vector genome transduction are selected from the group consisting of a packaging signal, a genome integration sequence, a replication

promoter, post-transcriptional cis sequences, post-translational cis sequences, and an expression cassette.

34-47. (Cancelled).